WHAT IS CLAIMED IS:

1. A charged-particle beam exposure apparatus for exposing a member to be exposed to a charged particle beam with a pattern, comprising:

storage means for storing a plurality of data for controlling a dosage of the charged particle beam in accordance with an irradiation position of the charged particle beam on the member to be exposed;

selection means for selecting any one of the plurality of data stored in said storage means; and

exposure means for controlling the dosage of the charged particle beam for each irradiation position on the basis of the data selected by said selection means, thereby exposing the member to be exposed with the pattern.

2. The apparatus according to claim 1, wherein the control data includes correction data for correcting influence of a proximity effect on reference dose data.

3. A charged-particle beam exposure apparatus for exposing a member to be exposed to a charged particle beam with a pattern, comprising:

first storage means for storing reference dose data of the charged particle beam in accordance with an irradiation position of the charged particle beam on the member to be exposed;

second storage means for storing a plurality of control data for performing proximity effect correction for respective irradiation positions with respect to the reference dose data;

selection means for selecting one of the plurality of control data stored in said second storage means; and

exposure means for performing proximity effect correction for the reference dose data on the basis of the control data selected by said selection means, thereby exposing the member to be exposed with the pattern.

4. The apparatus according to claim 3, wherein the reference dose data includes data for defining bitmap data determined depending on a pattern to be exposed, or data for defining bitmap data and an irradiation time ratio.

5. The apparatus according to claim 1, wherein the control data includes data which does not depend on a pattern to be exposed but depends on a condition of the member to be exposed.

6. The apparatus according to claim 3, wherein the control data includes data which does not depend on a pattern to be exposed but depends on a condition of the member to be exposed.

7. The apparatus according to claim 5, wherein the

condition is determined using as a parameter at least one of an underlayer condition of the member to be exposed, a resist material, and a backward scattering radius.

8. The apparatus according to claim 6, wherein the condition is determined using as a parameter at least one of an underlayer condition of the member to be exposed, a resist material, and a backward scattering radius.

9. A control data determination method comprising:

the step of generating reference dose data for each irradiation position of a charged particle beam for exposing a member to be exposed with a reference pattern;

the generation step of generating a plurality of control data for respective irradiation positions in accordance with conditions of the member to be exposed;

the storage step of storing in a memory the plurality of generated control data for the respective irradiation positions;

the selection step of selecting any one of the plurality of control data for the respective irradiation positions that are stored in the memory;

the exposure step of performing proximity effect correction for the reference dose data on the

basis of the selected control data, thereby exposing the member to be exposed with a pattern;

the determination step of evaluating the exposed pattern to determine whether the one selected control data is optimal data for controlling the reference dose data; and

the control data determination step of determining optimal control data for controlling the reference dose data in accordance with a determination result,

wherein the selection step comprises selecting control data other than the one selected control data until optimal control data is determined based on the determination result, and the determination step comprises evaluating the exposed pattern based on the selected control data.

10. The method according to claim 9, wherein whether the one selected control data is optimal data for controlling the reference dose data is determined by comparing the exposed pattern with the reference pattern by a visual check.

11. The method according to claim 9, wherein whether the one selected control data is optimal data for controlling the reference dose data is determined by evaluation means for comparing the exposed pattern with the reference pattern.

12. The method according to claim 9, wherein the reference dose data includes data for defining bitmap data determined depending on a pattern to be exposed, or bitmap data and an irradiation time ratio.

13. The method according to claim 9, wherein the control data includes data which does not depend on a pattern to be exposed but depends on a condition of the member to be exposed.

14. The method according to claim 13, wherein the condition is determined using as a parameter at least one of an underlayer condition of the member to be exposed, a resist material, and a backward scattering radius.

15. A charged-particle beam exposure method of exposing a member to be exposed to a charged particle beam with a pattern, comprising:

the step of generating a plurality of data for controlling a dosage of the charged particle beam in accordance with an irradiation position of the charged particle beam on the member to be exposed, and storing the data in a memory;

the selection step of selecting any one of the plurality of data stored in the memory; and

the exposure step of controlling the dosage of the charged particle beam for each irradiation position on the basis of the data selected in the

selection step, thereby exposing the member to be exposed with the pattern.

16. The method according to claim 15, wherein the control data includes correction data for correcting influence of a proximity effect on reference dose data.

17. A charged-particle beam exposure method of exposing a member to be exposed to a charged particle beam with a pattern, comprising:

the step of generating reference dose data of the charged particle beam in accordance with an irradiation position of the charged particle beam on the member to be exposed, and storing the reference dose data in a first memory;

the step of generating a plurality of control data for performing proximity effect correction for respective irradiation positions with respect to the reference dose data, and storing the control data in a second memory;

the selection step of selecting one of the plurality of control data stored in the second memory; and

the exposure step of performing proximity effect correction for the reference dose data on the basis of the control data selected in the selection step, thereby exposing the member to be exposed with

the pattern.

18. The method according to claim 17, wherein the reference dose data includes data for defining bitmap data determined depending on a pattern to be exposed, or bitmap data and an irradiation time ratio.

19. The method according to claim 17, wherein the control data includes data which does not depend on a pattern to be exposed but depends on a condition of the member to be exposed.

20. The method according to claim 19, wherein the condition is determined using as a parameter at least one of an underlayer condition of the member to be exposed, a resist material, and a backward scattering radius.

21. A device manufacturing method, wherein the steps of the method include the step of performing proximity effect correction for each irradiation position of a charged particle beam by the charged-particle beam exposure method defined in claim 15, thereby exposing a substrate with a pattern.

22. A device manufacturing method which uses for part of the manufacturing process a charged-particle beam exposure apparatus for performing proximity effect correction for a charged particle beam to expose a member to be exposed with a pattern, wherein the charged-particle beam exposure apparatus

executes:

the step of generating a plurality of control data for controlling reference dose data of the charged particle beam in accordance with an irradiation position of the charged particle beam on the member to be exposed, and storing the control data in a memory;

the selection step of selecting any one of the plurality of control data stored in the memory; and

the exposure step of controlling the reference dose data of the charged particle beam for each irradiation position on the basis of the control data selected in the selection step, thereby exposing the member to be exposed with the pattern.

23. A device manufacturing method which uses for part of the manufacturing process a charged-particle beam exposure apparatus for performing proximity effect correction for a charged particle beam to expose a member to be exposed with a pattern, wherein the charged-particle beam exposure apparatus executes:

the step of generating reference dose data of the charged particle beam in accordance with an irradiation position of the charged particle beam on the member to be exposed, and storing the reference dose data in a first memory;

the step of generating a plurality of control data for performing proximity effect correction for respective irradiation positions with respect to the reference dose data, and storing the control data in a second memory;

the selection step of selecting one of the plurality of control data stored in the second memory; and

the exposure step of performing proximity effect correction for the reference dose data on the basis of the control data selected in the selection step, thereby exposing the member to be exposed with the pattern.